

REMARKS

Claims 1-11 are all the claims pending in the application. Claims 1-11 presently stand rejected.

Objection to the Title

The Examiner has objected to the title DEVICE FOR DETECTING A ROAD TRAVELING LANE as being non-descriptive. In response, Applicant has amended the title to recite further description. Specifically, the title is amended to recite -- DEVICE FOR DETECTING A ROAD TRAVELING LANE AND DEFINING A BOUNDARY POSITION OF THE TRAVELING LANE--.

Claim Rejections Under 35 U.S.C. § 112 and 101

Claims 1 and 8 are rejected under 35 U.S.C. § 112, second paragraph.

Claims 1-11 are rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter.

In response to these rejections, Applicant has amended the claims so that they recite a *computer readable medium* instead of a device. One of ordinary skill would understand that the image processing section VC shown in FIG. 2 includes several sections or computer program modules, which corresponds to the previously recited “means.”

Thus, Applicant respectfully requests the Examiner to withdraw this rejection.

Claim Rejections Under 35 U.S.C. § 102 and 103

Claims 1-5, 8 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Otsuka et al. (US 2003/0103650).

Claims 6 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Otsuka in view of Ohta (US 2002/0159616).

Claims 7 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Otsuka in view of Kakinami et al. (US 5,991,427).

Claims 1 and 8

Claims 1 and 8 recite a computer program for a method including comparing a plurality of curves distributed in the vicinity of right and left lane boundaries out of the detected curves:

- (1) to define a position of one curve as *an innermost marking line*, when a segment group forming a curve closest to the center of said traveling lane has a predetermined length and repeated cycle, and
- (2) to define a position of a neighboring curve, outside of said innermost marking line relatively to the center of said traveling lane, *as a position of a boundary of said traveling lane*.

By the computer readable medium of claims 1 and 8, the lane boundary can be determined based on the identified innermost marking line, allowing the position of the lane boundary to be stably defined.

Applicant respectfully requests the Examiner to withdraw the rejection of independent claims 1 and 8 at least because Otsuka does not disclose all of the recitations of the claimed computer readable medium.

The Examiner asserts that Otsuka's center line 63 corresponds to the recited "boundary of said traveling lane."¹ Otsuka's center line 63 is designated based on the positions of lines 61, 62, which are the detected edges of input line images.

Therefore, Otsuka's method only pertains to the recited steps of detecting of edge points (i.e., 61, 62) and providing a line segment or curve for the edge points (i.e., 63). There is no in Otsuka disclosure regarding defining a neighboring curve as the lane boundary based on a curve identified as the innermost marking line.

Thus, Applicant respectfully requests the Examiner to withdraw the rejection of independent claims 1 and 8.

Dependent claims 2-7 and 9-11

Applicant respectfully requests the Examiner to withdraw the rejection of dependent claims 2-5 and 9 at least because of their dependency.

Applicant respectfully requests the Examiner to withdraw the rejection of dependent claims 6 and 10 at least because of their dependency and because Ohta, which the Examiner cites as showing a road marking removal system, does not make up for the deficiencies in Otsuka discussed above.

Applicant respectfully requests the Examiner to withdraw the rejection of dependent claims 7 and 11 at least because of their dependency and because Kakinami, which the Examiner cites as showing transforming edge points into a 3-D space, does not make up for the deficiencies in Otsuka discussed above.

¹ See Office Action at page 7, second full paragraph.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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